

FIFTY-FIRST
ANNUAL REPORT
OF THE
FISHERIES BRANCH

Department of the Naval Service

FOR THE YEAR

1917

PRINTED BY ORDER OF PARLIAMENT.



OTTAWA
J. DE LABROQUERIE TACHÉ
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY

1918

U.S. DEPARTMENT OF COMMERCE

FIFTY-FIFTH

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OF

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WASHINGTON

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*To His Excellency the Duke of Devonshire, K.G., P.C., G.C.M.G., G.C.V.O.,
etc., etc., Governor General and Commander in Chief of the Dominion of
Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit herewith, for the information of Your Excellency and the Parliament of Canada, the fifty-first annual report of the Fisheries Branch of the Department of the Naval Service.

I have the honour to be,

Your Excellency's most obedient servant,

C. C. BALLANTYNE,
Minister of the Naval Service.

DEPARTMENT OF THE NAVAL SERVICE,

OTTAWA, September, 1918.

ERRATA.

Page 26, last paragraph, should read:—"There were 95,122 persons engaged in the various branches of the fishing industry afloat and ashore during 1917, Of the total, 84,011 were engaged in the sea fisheries, 11,111 in the inland fisheries. There were 8,946 on vessels, tugs, and smacks; 62,700 in boats; 744 fishing without boats; and 22,732 working in canneries, freezers, smokehouses, etc., cleaning and preparing the fish for market."

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DEPUTY MINISTER'S REPORT.

To the Honourable C. C. BALLANTYNE,
Minister of the Naval Service.

SIR,—I have the honour to submit the fifty-first annual report of the Fisheries Branch of the Department of the Naval Service, which deals with (a) international questions and the investigation of the British Columbia salmon fisheries by special commission; (b) the various activities of the Branch; and (c) the production and value of the fisheries.

INTERNATIONAL QUESTIONS.

GENERAL.

For some years past, negotiations have been in progress with the United States for the settlement of certain outstanding fishery questions.

Ever since the American Revolution, the question of port, inshore, and onshore privileges to United States fishing vessels in Canadian waters and territory, has been a contentious subject, and at times it threatened the peaceful relations of the two countries.

This question was last dealt with in a permanent way by the Treaty of October 20, 1818, one hundred years ago. It soon afterwards developed that the two countries placed different interpretations upon the meaning of certain of its terms, and the question of the true meaning of such terms was not settled until 1910, when it formed the subject of an arbitration at the Hague. There had always been a disposition to exchange an extension of the privileges to United States fishing vessels in our waters for free access for Canadian fish to the United States markets. Provisions of this character were included in the Reciprocity Treaty of 1854 and in the Treaty of Washington of 1871.

In view of this, the United States Government, in 1914, following the removal of the duty on fresh and unmanufactured fish going into that country, requested an extension of the privileges to their fishing vessels in Canadian waters.

On the other hand, Canadian fishing vessels were not being allowed to go to United States ports with their catches direct from the fishing grounds, and if they found themselves there for any reason they were not given clearances back to the fishing grounds, but had to clear for a port in an outside country. Hence the removal of the duty was being largely nullified to them.

Also, with a view to properly protecting her lobster fishery, Canada maintains a close season for fishing lobsters, during which Canadian fishermen are not permitted to fish either inside or outside Canadian territorial waters. But during the closed time along the southwestern coast of Nova Scotia, United States well-smacks have for years past been coming over and fishing outside territorial waters, and using our harbours at nights for shelter. This practice, Canada felt was a violation of the spirit and intention of the Treaty of 1818, and the fishing was not only causing great unrest amongst our local fishermen, but was in a large measure nullifying the good effects of our close season.

Negotiations had been proceeding during the past two years for a settlement of these matters, but with no definite result.

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Meantime a difficult and rather critical condition was developing on the Pacific coast. Since 1897 Canada has been granting special privileges to United States fishing vessels coming to British Columbia ports with their catches, by which they were enabled to ship their fish in bond to the United States. Following the completion of the Grand Trunk Pacific, these privileges were extended so as to allow vessels to sell their catches in bond to some duly authorized person or firm, who would in turn ship them in bond to the United States, thus enabling small vessels that did not land carload quantities, or that had not selling facilities in the Eastern States to avail themselves of the Canadian ports. As Prince Rupert is much nearer the fishing grounds than Seattle, most of the vessels from that port began to resort to the former to dispose of their catches. This caused great unrest and agitation in Seattle and in Ketchikan, Alaska, and last year a Bill was introduced into Congress which had for its object the preventing of any Pacific-caught fish being shipped into the United States through Canada, unless the consignments of such originated in a United States port. Representations were made by Canada against the adoption of this Bill and, while it passed through the initial stages, it was finally defeated, but notice was given that it would be again introduced at the following session of Congress. After protracted negotiations, Canada finally offered to settle the whole matter on both coasts on the following basis:—

1. That the *modus vivendi* be extended to all fishing vessels, by whatever means they may be propelled, that it be applied to the Pacific Coast as well as to the Atlantic, and that the annual fee be reduced from one dollar and fifty cents per registered ton to the nominal sum of one dollar per vessel. Also, that the renewal of the licenses from year to year be not conditional on an Order in Council, but form part of the arrangement itself.
2. That United States fishing vessels on both coasts be allowed to sell their fish in Canadian ports for the Canadian markets, subject to Customs duty, as well as to sell in bond.
3. That Canadian fishing vessels be allowed to purchase bait in United States ports or waters, on equal terms with American fishing vessels.
4. That Canadian fishing vessels be allowed to take their catches to United States ports and sell them there, subject to Customs duties, if any.
5. That fishing vessels of either country visiting ports in the other, be given clearances for the fishing grounds, if so desired.
6. That the United States prevent American lobster well-smacks from fishing off the Canadian coasts during the close seasons for lobster fishing on such coasts.
7. That such arrangement be in force until the expiration of two years after either party thereto shall give notice to the other of its wish to terminate the same.

Following receipt of these proposals the United States asked for the appointment of a Joint Commission to fully consider the whole matter. This was agreed to, and a commission consisting on the United States side of Hon. W. C. Redfield, Secretary of Commerce, Hon. E. F. Sweet, Assistant Secretary of Commerce, and Dr. H. M. Smith, Commissioner of Fisheries; and, on the Canadian side, of Hon. J. D. Hazen, Chief Justice for New Brunswick, (but who was Minister of this department while the negotiations were going on), W. A. Found, Superintendent of Fisheries, and the undersigned. Two other highly important questions—the rehabilitation and production of the sockeye fishery of the Fraser river system, and the protection of the halibut fishery of the Pacific coast—which were under consideration between the two Governments, were also referred to the commission. As the conditions of these two fisheries and the causes of the decline therein have been dealt with in recent annual reports, it is unnecessary to go into details of them herein.

The commission met at Washington on the 16th of January, and continued in session there until the 24th of that month. While substantial progress was made at these sittings, it was found to be desirable to hold some public sittings on both the Atlantic and Pacific coasts before reaching decisions. Such sittings were held in Boston and Gloucester, Mass., and St. John, N.B., from January 31, to February 6, both days inclusive. The commission then adjourned to meet

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at Seattle, Wash., on April 24, next. Following the return to Washington and Ottawa, respectively, of the two sections of the commission, they took up with their Governments the question of a temporary arrangement during the war to meet the difficulties in connection with privileges to the fishing vessels of either country in the ports of the other, with the object of removing every barrier to the greatest production of food and the freest movement thereof. On the 21st February the United States Secretary of Commerce, with the authority of the President, sent the following notice to the United States Collectors of Customs:—

To promote the vigorous prosecution of the war and to make the utmost use jointly of all the resources of the nations now co-operating you will permit, during the war, Canadian fishing vessels and those of other nations now acting with the United States to enter from and clear for the high seas and the fisheries, disposing of their catch and taking on supplies, stores, etc., under supervision as in the case of merchant vessels entering and clearing for foreign ports, except as to tonnage tax and other charges specifically imposed on entry from and clearance for foreign ports.

On the 8th March an Order in Council in the following terms was approved:—

The Minister of the Naval Service recommends, under the authority of the War Measures Act, chapter 2 of the Statutes of 1914, that during the war, United States fishing vessels, in addition to their treaty rights and privileges, shall be permitted to enter any port in Canada, without the requirement of a license, or the payment of fees not charged to Canadian fishing vessels, for any of the following purposes:

(a) The purchase of bait, ice, nets, lines, coal, oil, provisions and all other supplies and outfits used by fishing vessels whether the same are of a like character to those named in this section or not;

(b) Repairing fishing implements;

(c) Dressing and salting their catches on board ship;

(d) The shipping of crews;

(e) The transshipment of their catches;

(f) The sale thereof locally on payment of the duty.

The Minister further recommends that the fees paid on licenses already taken out for the present calendar year be remitted.

Thus for the term of the war this troublesome question has been fully and satisfactorily settled.

Also during the time that the commission was in Washington, the Secretary of Commerce gave instructions to have a Bill prepared for immediate introduction into Congress to prevent the continuance of United States lobster well-smacks coming over to the Canadian coast and fishing lobsters outside territorial waters during the Canadian close season there.

It is anticipated that the commission will complete its investigations and submit its report during the coming summer.

FUR-SEAL FISHERY.

Under the Pelagic Sealing Treaty of 1911, between Great Britain, the United States, Japan, and Russia, pelagic sealing, or the killing of fur seals at sea, is prohibited—excepting to the extent that such may be done by the Indians or other aborigines along the coast, using canoes—for a term of at least fifteen years, and during this period Canada is to receive 15 per cent gross in number and quality of the seal skins taken on the United States and Russian seal islands, and 10 per cent of those taken on the Japanese islands.

As the herds were so very seriously depleted when the treaty became effective, the year following, both the United States and Russia stopped all commercial killing on their islands for five years, so that commercial killing will begin in both countries in 1918.

In early years, before pelagic sealing became important, the United States islands readily yielded one hundred thousand fur seal-skins annually without

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showing any ill effects on the herds, but in 1911, when the treaty came into effect, the total number of seals resorting to these islands was estimated at 123,600.

The increase during the past five years has been very satisfactory. A careful census taken in 1917 showed the presence of 468,692 seals on the islands.

As seals are born in about equal numbers as regards sex, and as they are highly polygamous, a large percentage of the young male seals may be killed each year, not only without detriment, but with absolute advantage to the seals. It is probable that from 20,000 to 30,000 such seals will be killed on these islands during the coming summer.

It has not been possible to procure much information regarding the conditions on the Russian Islands, but the total number of seals on these islands in 1917 was given as 15,000, and it was proposed to kill 750 during the summer of 1918.

The Japanese rookeries are quite small. They are now practically restricted to those on Robben island, which was ceded to Japan by Russia at the close of the Russo-Japanese war. Small killings went on, on these rookeries since 1911, with the exception of 1916 and 1917. Canada's share for the years 1912, 1913, and 1914, amounted in the aggregate to 123 skins. These were recently sent by Japan with her own share to St. Louis, U.S.A., to be sold at the fur sales there in April, 1918. Canada's share of the skins taken in 1915 amounted to 58. These were forwarded to Messrs. C. M. Lampson and Company, of London, during the present year, and will be sold in the April, 1919, sales.

While the number of seals reaching the island in 1916 and 1917 during the killing season was small, the census taken in the latter year showed that during the three months beginning with the 1st of August, 10,515 seals resorted to the islands. This is an eminently good showing, and is clear evidence that the rookeries will be in excellent condition in a few years.

Unless unforeseen conditions prevail, Canada will, beginning with 1918, receive an important revenue from its interest in the seal herds, the amount of which will rapidly grow from year to year as the sizes of the different herds increase.

SPECIAL COMMISSION TO INVESTIGATE THE SALMON FISHERIES OF DISTRICT NO. 2, BRITISH COLUMBIA.

The administration of the salmon fisheries of British Columbia, so as to enable the industry to be carried on to the greatest public advantage, and at the same time to afford the different species of salmon the protection necessary to maintain the runs thereof at a maximum of productivity, involves some of the most difficult and perplexing problems with which the department has to deal. Also, until the Privy Council decision in the Fisheries reference, in 1913, the question of right as between the Province and the Dominion was not fully defined, and dual jurisdiction prevailed, which added to the difficulties of the situation.

For several years the number of salmon canneries in district No. 2—that portion of the province north of cape Caution—was restricted to a given number. The number of fishing licenses in the different areas was also, and still is, limited to that which investigations have shown the fisheries could safely stand, and these licenses were definitely allotted to the different canneries.

Some years ago it was decided that a departure from this policy was desirable, and accordingly licenses for some additional canneries were granted, and a number of the fishing licenses in each area were issued to *bona fide* white fishermen as unattached or independent of any cannery.

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After much consideration it was decided in 1917 that the time had arrived when all the fishing licenses should be issued independently of the canneries, and that restriction of the number of canneries to be allowed should be removed. Accordingly those engaging in the industry were notified that this would be done beginning with the season of 1917.

Following announcement of this decision, nearly all the canners interested interposed the most strenuous objection. They maintained that if this course were followed it would jeopardize the future of the industry, and in a few years it would be in a state of bankruptcy and chaos, when the position of the fishermen themselves would be much worse than at the present time. They expressed confidence that while the proposed policy might seem proper in theory, if the real state of the business end of the industry were fully understood, the department would not advise such a course, and they asked for a thorough investigation by a commission consisting of absolutely disinterested business men. It was decided to grant this request, and a commission consisting of Mr. W. Sanford Evans, as chairman, Mr. H. B. Thompson, now chairman of the Canada Food Board, and Mr. F. T. James, of the F. T. James Company, Limited, Toronto, was appointed.

The commission was asked to investigate and submit findings on the following points:—

1. Whether the number of salmon canneries allowed to be operated in District No. 2, British Columbia, should be restricted to the number of licenses for such establishments as are now effective, and if so, for what length of time.

2. Whether motor boats should be allowed to be used in salmon fishing operations in the said district.

3. Whether the number of fishing boats now allowed to be used in any area should be enlarged or reduced: (a) if motor boats are allowed, and (b) if row boats only are permitted, and if so, by how many in either case and in either direction.

4. Whether any of the boats authorized to be used in any area should be licensed to fish in connection with specified canneries only, and if so, what proportion of such boats.

5. Whether the export in a fresh condition of other varieties of salmon than sockeye should be prohibited, and if so, to what extent.

6. The actual amount of money in cash originally and at present invested in each cannery and equipment; the annual business done and the expenses connected therewith and the gross and net annual profits or losses sustained by each cannery in the said district since the boat-rating became effective, such information to be obtained by the examination of witnesses under oath, or by an audit of the books, or both, as may be found most desirable by the commissioners.

7. Such other points directly connected with the salmon fishing and canning industries in this district as in the opinion of the commissioners will better enable them to reach proper conclusions on the aforesaid subjects.

They investigated the matter very thoroughly during the past summer, and visited every area in which fishing was carried on.

As the commission submitted its report to you a few days before the end of the fiscal year, and as it is being printed for public use, it is unnecessary to comment on it herein.

CHANGE IN STATISTICAL YEAR.

Heretofore the twelve months period covered by the annual report on the fisheries was that of the fiscal year, extending from 1st of April to 31st of March following. But as the great bulk of the annual catch is landed during the spring, summer, and fall months—operations during January, February, and March being on a more limited scale—it was decided, since the last report was published, that the year for statistical purposes should, in future, be the calendar year. Consequently, the twelve months now being reported on are those from January to December, 1917.

The figures for the first three months of the year were, of course, included in the last report and are repeated in this one in order that a full calendar year may be covered at the beginning for future comparative purposes.

CHANGE IN METHOD OF PUBLISHING REPORT.

There has also to be noted a change in the method of publishing the annual report. Under an arrangement for statistical co-operation between this department and the Dominion Bureau of Statistics, the latter will publish as a joint report the usual details of production by counties and districts, as Part III of its Census of Industry, under the title "Fisheries Statistics of Canada." The statistical information, however, is collected by our fishery officers and checked in this department, as before. It is then handed over to the Bureau of Statistics for publication. This report, therefore, contains a summary only of the production and value of the fisheries for the period named.

DEPARTMENTAL ACTIVITIES.

CONTROLLING AND PROTECTING THE FISHERIES.

To afford adequate protection to the fisheries that require such is, unfortunately, still a difficult and expensive matter. The vast extent of our country, its comparatively sparse population, the great number of rivers and streams up which anadromous sea fish ascend to spawn, many of these being in practically uninhabited portions of the country, the high prices and ready demand for the different species of fish and shell-fish most needing protection, all add to the difficulty of fully enforcing provident and necessary regulations. As the department's outside organization becomes more efficient and stronger, and as public sentiment against infractions of the fishery laws grows more emphatic, it is hoped that the department's work in this respect will become lighter.

No one is permitted to engage in most of the fisheries that will admit of only limited prosecution, unless he first procures from the department a fishery license. Up to the present the fisheries have not been regarded as an industry from which much direct revenue should be procured, hence the license fees are usually nominal as compared with the value of the concessions. During the present year a total number of 26,565 licenses were issued.

To see to the enforcement of the license provisions and the other laws and regulations designed to afford the various fisheries necessary protection, the fisheries branch has an outside organization consisting of chief inspectors, inspectors, overseers, and guardians, as well as a fleet of patrol boats to supervise waters that cannot be efficiently controlled from the land alone.

The first three named classes of officers are permanently employed, but the guardians are engaged only during such times as the overseers need special assistance. During the present year the numbers of officers and patrol boats in the different provinces were as follows:—

Province	Chief Inspectors	Inspectors	Overseers	Guardians	Patrol Boats
British Columbia	1	1	1	1	1
Manitoba		1	1	18	1
		1	1	19	1
		1	1	457	1

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The organization in the eastern provinces is, in most portions thereof, inefficient. The number of officers is unduly large, but they are paid mere pittance, so that it is unreasonable to expect that they can devote to their fishery duties the time necessary for their proper performance. It is essential that a complete reorganization of this portion of the service should be effected without avoidable delay.

But while this class of work is of the utmost importance, and is very exacting on time, the affirmative side—the doing of things to increase the knowledge of the fishermen in the life-history of fish, to enable them to catch more fish, to prevent them losing valuable time unnecessarily, to encourage the better handling of fish so that fishermen will get more for their catches and consumers will receive a better article of food, to provide better facilities and cheap transportation rates for fish, to bring to the attention of the general public the value and comparative cheapness of fish as food, the keeping up and increasing the supplies of certain kinds of fish by artificial hatching and rearing, etc.,—has during this year received a full share of attention.

TRANSPORTATION OF FRESH FISH.

The assistance in affording better transportation facilities and cheaper rates for fish, that has been in operation for a number of years past, has been continued with some modification during this year. This work was started in 1907, and has proved one of the most helpful of the department's activities. Indeed such success has been met with, that the object in view—placing the fish business in a position where it can take care of itself—has been almost accomplished, so that the time is drawing near when it will be unnecessary for the department to bear any portion of the transportation charges on fish, but it will be always its duty and pleasure to aid in every feasible way in securing more adequate transportation facilities. Important as cheap rates are, proper facilities are even more important.

When this service was first undertaken, the shipments of fresh, mildly cured, and fresh frozen fish from the Atlantic coast, were so small that the railways did not find it feasible to place refrigerator cars, even to be hauled by freight, at the disposal of the dealers. There were no refrigerator express cars for fish, and the rates by the ordinary express cars were so high as, under the conditions then obtaining, to preclude the possibility of rapidly expanding the demand in the larger centres of consumption. Moreover, meat was then plentiful and cheap in all parts of the country, and as meat is less perishable and easier to handle than fish, it was extremely difficult to compete against it. Another great obstacle in Canada that does not obtain even in the United States is that, at least on the Atlantic coast, we have no large cities, and even on the Pacific coast there is but one. Montreal, the nearest one to the Atlantic, is nearly one thousand miles from the main shipping points in Nova Scotia.

In 1907 the department arranged for a limited refrigerator fast-freight service from Halifax and Mulgrave to Montreal, and the following year it undertook responsibility for the payment of one-third of the express charges on L.C.L. shipments from the Atlantic coast to points in Quebec and Ontario, and with a view to working up a demand in the Prairie provinces, a similar payment was authorized on shipments from the Pacific coast to such provinces.

Good effects immediately became manifest, and it affords the department the keenest pleasure to testify to the energy of the wholesale dealers and the larger producers, and to the cordial manner in which they co-operated with it and with each other to bring about the best results. Also the Canadian Government Railway and Express Companies, though unable to afford lower rates, have been doing everything they found to be feasible to encourage the business.

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Experience shows that the needs of the business would be best served by a frequent express service by refrigerator cars, and year by year efforts were made to bring this about. Experiments in a limited express refrigerator service were made on different occasions, but sufficient cars of proper construction have not been available to the express companies. Moreover, the railways have not found it practicable to load their passenger trains, on which the express cars are hauled, to a greater extent than they have been doing. When the time comes that the mails and express packages will be of sufficient volume to require handling by separate trains, the difficulty of express refrigerator car shipments will, no doubt, be largely overcome. Meantime, the extension of the refrigerator fast-freight service, to be operated on schedule time, so far at least as the Atlantic coast is concerned, seems to offer the best solution of the problem for through shipments. Fish forwarded by such service reach their destination in better condition than consignments shipped in ordinary express cars. Hence, arrangements have been made with the railway to have a refrigerator fast-freight service made available to the shippers from the Atlantic coast three days each week, and the department looks forward to the time when this will be a daily service, operated on schedule time, so that it will be to all intents and purposes an express service at freight rates. It also hopes that it will be found feasible to extend this service at least to Toronto.

The growth of the business from the time the department first arranged for improved transportation facilities has been rapid, and, with the exception of the first two years of the war, continuous. The progress, that was made in the earlier years of such assistance in the different branches of the industry, made it possible for the producers and dealers to take advantage, to a much greater extent than would otherwise have been possible, of the opportunities that have more recently been arising on all sides.

The Canada Food Board, which was appointed this year, has done its full part in developing the demand for fish. It was not slow to recognize the place that fish could and should occupy in the food of our people, and its powers in controlling the use of different foods place it in a position to do the eminently excellent work it is doing, in making the use of fish much more general. There has been the closest co-operation between the board and this department.

Also the Canadian Fisheries Association has done excellent work in organizing the industry to the extent it has, thus bringing about closer co-operation amongst the different branches thereof. The department trusts that a realization of the benefits of such organization will speedily become general throughout Canada, on the part of the fishermen themselves as well as on that of the larger producers and of the wholesale and retail dealers, so that the association will be able to speak with full authority for all parts of the industry.

On the Pacific coast the industry has been so far largely confined to the salmon, halibut, and herring fisheries, notwithstanding that this coast is rich in other fisheries, and that vast quantities of other excellent edible fish are caught in fishing for halibut, but have been mostly thrown away as caught, on account of the lack of markets for them. The demand for halibut and salmon, both in Canada and the United States, has grown so rapidly in recent years that it is now greater than the supply, so that there is no longer need for the payment of any portion of the transportation charges on these fish.

On the other hand, it is pre-eminently desirable, both from the standpoint of the industry and of the public, that the various species of excellent flounders and so-called "cods" and other fish which can be produced cheaply and abundantly on the Pacific coast, should come into general use. To introduce these fish it is essential that they should be sold to the consumer at low prices. To this end it was decided during the past fall to change the method of assistance in shipments from the Pacific coast by discontinuing the payment of any portion

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of the express charges on halibut and salmon, and to replace such by the payment of two-thirds of the transportation charges on shipments of other fish, whether forwarded by express or freight, or in carload or less than carload lots. With this assistance, and under arrangements made by the Canada Food Board, it became possible to place flounders, cod, etc., on most of the markets of the Prairie Provinces at a retail price of 10 cents per pound. The result has been highly gratifying. Already important shipments are being made from week to week, and it is evident that the time is not far distant when the demand for these fish will be large enough to maintain an important fishing industry for them as such, instead of as a by-product of the halibut fishery. Indeed, already one company has found it feasible to start a steam otter trawler in fishing for flounders, etc.

While it has not been found practicable so far to procure a record of the total weights of the different varieties of fish supplied to the interior markets, the following statement showing the amounts paid by this department as its one-third of the charges on L.C.L. shipments by express, indicates in a measure the growth of the business:—

Year.	From East Coast.	From West Coast.
1909-10	\$15,162 20	\$13,541 76
1910-11.	16,898 13	21,896 73
1911-12.	19,620 62	35,315 10
1912-13.	29,969 48	39,277 13
1913-14.	37,818 85	44,114 47
1914-15.	26,667 33	34,528 60
1915-16.	27,122 69	34,872 56
1916-17.	32,717 73	36,799 80
1917-18.	49,550 89	46,371 84

As above indicated, this shows only a limited portion of the trade and its growth. By the refrigerator fast-freight service from the Atlantic coast, several carloads are shipped weekly. Also from the Pacific coast a number of carload lots are shipped weekly by express to supply the needs of Toronto, Montreal, and Winnipeg, on which no portion of the transportation charges are paid by this department. In addition to these, throughout the winter large shipments of frozen fish are forwarded from both coasts by ordinary freight.

On the whole, the expansion of the use of fresh, fresh frozen, and mildly cured fish in this country must be regarded as satisfactory, but the expansion that has taken place this year is merely an indication of the possibilities from now on. This country is particularly fortunate to have, at a time like this, fisheries that are second to none in their extent, variety, and abundance. The supply of meat, even before the war, had fallen below the demand. The shortage is now vastly greater apart from the fact that it is imperative that we shall not only export sufficient to meet the requirements of our soldiers overseas, but that we shall do our full part in supplying the needs of the Motherland and our European allies. There seems little room for hope that the meat shortage will be any less when the war ends. Indeed, it is not improbable that the most critical period in the world's food supply will be during the few years succeeding the war. Hence the possibilities for expanding the demand for fish during the next few years are vastly greater than they ever were.

To enable full advantage of these possibilities to be taken, two things are of paramount importance:—

(1) That the railways and express companies provide adequate transportation facilities at reasonable rates; and

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(2) That the people of this country and of this continent be made to realize that fish that are properly frozen as soon as they are landed, that are shipped in a frozen condition in refrigerator cars and that are sold retail still frozen, without ever having been thawed, are the next best thing to these fish right at the seaside, as they are delivered from the boats or vessels. There is no room for doubt that fish so handled are much superior to the same fish, if shipped in a fresh, unfrozen condition packed on ice, even in refrigerator cars, when laid down in the interior markets. Also such fresh frozen fish can be shipped in perfect condition to any part of this continent that has railway connection. Furthermore, with a demand for frozen fish there need never be times of shortage and superabundance depending on weather conditions on the fishing grounds, as investigations have demonstrated that frozen fish may be held in storage for months without undergoing the slightest deterioration.

In addition to home consumption, large quantities of fresh frozen fish have been shipped overseas this year for use by the Canadian army there, as well as to supply the domestic needs in Great Britain. Even with the high transportation rates across the ocean, these fish cost less laid down in England than it was possible to purchase similar fish produced there.

The rapid growth in the fresh frozen and mild cured fish trade is being reflected in the fishing industry itself. Better equipment, so as to enable larger landings of fish, is being rapidly introduced. The following statement, showing the growing number of motor boats operated by fishermen in recent years, clearly evidences this:—

Year.	Atlantic Coast.	Whole of Canada.
1910-11..	4,200	4,588
1911-12..	5,788	8,700
1914-15..	6,770	9,307
1915-16..	8,119	11,097
1916-17..	9,719	12,828
1917..	10,761	14,823

Also, this year four steam otter trawlers were in operation on the Atlantic coast and one on the Pacific.

As many of our fishermen enlisted for overseas military service, it became evident early in the year that fewer would be engaging in the industry than previously, notwithstanding the importance of producing even much larger quantities of fish. Hence a call was sent out by the department to the fishermen on all parts of the coast to individually make increased effort to produce more fish. That this call was not in vain seems apparent by the fact that the total landings this year were greater than last, notwithstanding that a considerably fewer number of fishermen were engaged, particularly on vessels.

POSSIBILITIES FOR EXPANSION OF CURED FISH INDUSTRY.

The opportunities for development of our fisheries are not now only along the line of the fresh, fresh frozen and mildly cured business. The markets of the world for dry cured, pickled, cut and canned fish, are available to Canada to a much greater extent than ever before, owing to conditions brought about by the war. We have the fish in abundance. On account of the proximity of the fishing banks to our coasts, we can produce fish cheaply. All that is needed to assure a full share in the world's markets is that by proper handling, curing and packing we produce an article equal to the best procurable anywhere.

It is eminently in the interests of Canada that her fisheries should be developed as rapidly as possible. There is no branch of production that lends itself more readily to the enrichment of the country than its fisheries. They cost nothing to produce, beyond the fishing equipment and the labour employed. Therefore the exportation of fish operates strongly towards a favourable balance of trade.

FISHERIES EXHIBIT AT TORONTO.

With the object of increasing the demand for fish, the department again this year, for the fifth successive time, made a fisheries exhibit at the Canadian National Exhibition at Toronto, and for the third successive year it had operated in connection with the exhibit a first-class fisheries restaurant.

The exhibit was even better than any of the preceding ones. It embraced not only a thoroughly comprehensive exhibit of frozen fish, but of fresh, canned, cured and boneless fish as well. Models of the most modern fishing vessels and equipment were also shown. The fresh fish were attractively displayed in chilled show cases in a manner that should be generally adopted in retail stores. Booklets containing information regarding our fisheries, and how to clean and cook the different kinds of fish were freely distributed to those interested.

The exhibit was an unqualified success, and like the previous ones it was one of the leading features at the fair. For the first time in the previous years, the department was awarded a gold medal.

The restaurant was also a splendid success. A good fish dinner was served for 35 cents. It was operated in the east wing of the Grand Stand building. The room was commodious and airy. About six hundred could be accommodated at one time. During the days when the attendance at the fair was large, the patronage of the restaurant was limited only by its capacity; 38,772 meals were served during the twelve days the restaurant was in operation.

OYSTER CULTURE.

The officer in charge of this service spent the season in examining and cleaning the public oyster beds so as to increase their productivity, and in assisting those engaging in artificial culture and cultivation by affording them advice, and investigating problems confronting the development of the industry.

For some years past there has been a very large influx of starfish into Richmond bay, Prince Edward Island, the home of the well known Malpeque oyster, and one of the most productive areas in Canada. Until recent years these beds were practically free from starfish or other enemies to the oyster. What the cause of the great inroads of these pests may be is a matter of conjecture, but continuous mopping of the beds to remove them is necessary to prevent them completely over-running the beds.

During the past season a blight was found to have broken out amongst the oysters in Richmond bay, and it soon spread to the beds in all portions of the bay. The department caused immediate investigations to be undertaken by the Biological Board to determine the nature and cause of the blight, and, if possible, to prescribe a remedy. The scientific view is that the oysters are affected by a tubellarian parasite of an undescribed species, similar to that which appeared at times on beds along the coasts of Florida and Connecticut. Science has not yet discovered either the cause or remedy, but experience indicates that it is of comparatively short duration, and disappears entirely after running its course.

It has been suggested that the blight was imported in seed oysters procured in the United States and laid down in the bay by some of those who had undertaken oyster culture there, but so far as this department has been able to ascertain there was not at the time, nor has there been since, any similar blight on the beds, or on those in the vicinity, from which these seed oysters were taken.

Whatever the cause may have been, the outcome is extremely unfortunate, as it seems evident that all the oysters in this magnificent bay, both on the private and public areas, will succumb.

The position of the oyster industry in the Maritime Provinces is an extremely unsatisfactory one. There are in these provinces approximately 10,550 acres of producing natural beds, viz., 5,000 acres in New Brunswick, 4,300 in Prince

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Edward Island, and 1,250 in Nova Scotia, but there are tens of thousands of acres around the coasts of these provinces that by proper artificial culture and cultivation could be converted into highly producing oyster areas. Experience in every country where it has been properly tried, shows that oyster farming, though probably somewhat more hazardous, is just as feasible, and usually much more profitable than upland farming. In early years, when the demand for oysters was small, the natural public beds readily yielded all that were needed, but as the demand increased, fishing became more intensive, the beds began to suffer. From time to time the fishing season was curtailed until now it is only about a month or six weeks in the year, but the growing number of fishermen more than offset the shortening of the season, and the beds are now on the verge of commercial exhaustion. Experience, wherever oysters are found, shows that natural beds alone cannot meet the requirements of a growing demand.

As long ago as 1892 the department brought over an expert from England to advise as to the best course to pursue, and his services have since been retained; but under the conditions that have obtained, it has been impossible for him to achieve satisfactory results.

The importance of encouraging private culture and cultivation was years ago realized, and prior to the Privy Council decision in the Fisheries reference, in 1898, a number of leases of areas on which to carry on such operations were granted. Following that decision the provinces claimed that by virtue of it they owned the oyster beds, and therefore that they alone could administer the fishery thereon. The Federal Government took an opposite view, so that neither one nor the other was in a position to grant leases of a satisfactory nature, and nearly all those that had previously been issued were allowed to terminate. Negotiations for some settlement of the whole question of fishery rights as between the Dominion and provinces went on intermittently, but year by year went by without anything definite being accomplished, and meantime the public beds were continuously going down.

Finally in 1910 this department endeavoured to have the deadlock broken by entering into a *modus vivendi* with the provinces by which, pending the settlement of the legal points at issue, the administration of the industry would be placed in its hands on the understanding that if it were ultimately decided that the contention of the provinces were correct, a proper accounting for fees collected would be made to them, and that they would sustain those to whom leases might have been granted, in their holdings. To this, all the provinces were not prepared to agree, but they all expressed a readiness to undertake themselves the administration of the industry, so far as the leasing of private areas is concerned, and the building up of a business in the culture and cultivation of oysters.

In the circumstances the department decided to ask for the necessary legislation to enable this to be done, and in 1910 the Fisheries Act was amended so as to authorize agreements to be entered into with the different Provincial Governments whereby they would be empowered "to grant leases of such areas of the sea coast, bays, inlets, harbours, creeks, rivers, and estuaries of such provinces as the Government of such provinces considers suitable for the cultivation and production of oysters." Following this legislation, enabling agreements were entered into with the different sea-washed provinces, and it is understood that some leases of areas have been issued in each of the three Maritime Provinces, though outside of New Brunswick little progress has apparently been made.

The provinces, however, were not prepared to take over the administration of the public beds as well, so that the unsatisfactory and indeed largely unworkable condition of dual control still exists. It is clearly in the public interest that this should be ended, and it is hoped that some way of accomplishing this will shortly be found.

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The possibilities of the building up of a very large oyster and other mollusk industry are obvious, but in the initial stages, which must be largely experimental, the most careful guiding and control is essential. Under proper conditions there seems no reason why a business could not be built up that would produce a total annual revenue to those engaging in it that would run into millions of dollars.

FISHERIES MUSEUM.

The excellent Fisheries Museum, which was being built up in Ottawa, had to be dismantled during the year, as the building used was demolished to give place to a large government office building. As no other suitable building was available, most of the specimens had to be stored. Some have been placed in the Victoria Memorial Museum, which is now being used for parliamentary purposes, and some models of fishing equipment were sent to the commercial exhibit of the Department of Trade and Commerce.

As Canada has fisheries second to none in the world, it is fitting that there should be in the Capital a Fisheries museum that would be equal to the best anywhere. It is hoped that when the days of peace return it will be found feasible to erect a proper building for this purpose.

The curator of the museum, who is also the department's naturalist, has been detailed to assist Dr. A. P. Knight, of the Biological Board, in a study of the natural history of the lobster.

FISHING BOUNTY.

Under the authority of "An Act to encourage the development of the Sea Fisheries and the building of Fishing Vessels", the sum of \$160,000 is appropriated annually by the department and paid to fishermen of the eastern Maritime Provinces. The bounty is distributed under regulations made from time to time by the Governor in Council.

For the year 1917, payment was made on the following basis:—

To owners of vessels entitled to receive bounty, \$1 per registered ton; payment to the owner of any one vessel not to exceed \$80.

To vessel fishermen entitled to receive bounty, \$6.30 each.

To owners of boats measuring not less than 13 feet keel, \$1 per boat.

To boat fishermen, entitled to receive bounty, \$3.85 each.

There were 14,532 bounty claims received, and 14,516 paid. In the preceding year, 13,604 claims were received, and 13,593 paid.

The total amount paid was \$159,893.10, allocated as follows:—

To 812 vessels and their crews \$52,748.20.

To 13,704 boats and their crews \$107,144.90.

The following table shows in detail the payment of the bounty by counties for the year 1917:—

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been made to waters from which the eggs were obtained, the greater part of the remainder is distributed in publicly controlled waters, on application, while a small proportion is supplied to privately controlled or leased waters on payment of fixed prices and all transportation charges.

Owing to war conditions, no new hatcheries were erected. A shortage of labour, a scarcity of fish in some districts, and unfavourable weather conditions in others, resulted in a decreased collection of eggs, and in the hatcheries not all being filled to capacity.

There are fifty hatcheries, fourteen of which are lobster hatcheries. There are also eleven subsidiary hatcheries, six salmon retaining ponds, and one lobster pound in operation. From these the total distribution of the various species in each province during the season of 1917 was as follows:—

Nova Scotia -	
Atlantic salmon.....	7,176,650
Speckled trout.....	103,400
Lobsters.....	304,589 956
New Brunswick	
Atlantic salmon.....	10,333,255
Speckled trout.....	106,401
Ouananiche salmon.....	580
Rainbow trout.....	8,000
Shad.....	400,000
Lobsters.....	138,987,000
Prince Edward Island -	
Atlantic salmon.....	1,000,000
Speckled trout.....	241,400
Lobsters.....	108,000,000
Quebec -	
Atlantic salmon..	6,385,825
Speckled trout.....	164,690
Ouananiche salmon.....	10,000
Lobsters.....	63,220,000
Ontario	
Speckled trout.....	500
Herring	55,850,000
Pickereel.....	169,000,000
Salmon trout.....	32,405,170
Whitefish.....	177,535,000
Manitoba	
Pickereel.....	15,824,000
Whitefish..	277,100,000
Saskatchewan	
Whitefish.....	42,497 000
Alberta	
Atlantic salmon.....	103,849
Cutthroat trout.....	374,527
Lake herring.....	2,189,000
Salmon trout.....	281,114
British Columbia	
Atlantic salmon.....	245,050
Speckled trout.....	137,965
Cohoe salmon.....	2,542,210
Cutthroat trout.....	493 201
Dog salmon..	4,988,600
Kamloops trout.....	653,453
Rainbow trout.....	16,200
Sockeye salmon.....	73,142,820
Spring salmon..	3,249,540
Steelhead salmon.....	26,304
Total distribution	1,499,482,670

The department is indebted to the United States Bureau of Fisheries for a present of 10,000,000 sockeye eggs from Alaska. The eggs were placed

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in a British Columbia hatchery, and the fry will be distributed in the Fraser river.

Evidence of the most satisfactory results from the department's fish cultural operations is apparent on all sides. The catch of whitefish per net in lake Winnipeg was never better than during the current season. The fishery for whitefish in lake Erie, the greatest whitefish-producing area in Canada, and in lake Ontario, tends rapidly towards the prosperous condition in which it formerly was. The salmon rivers of Quebec and the Maritime Provinces were never in better condition; the spawning areas are covered with salmon which are forcing their way into the highest tributaries of the various rivers.

Similar results are not apparent from the lobster hatcheries. Indeed, there is not satisfactory evidence to show that they are even proving beneficial. Hence it has been decided not to operate them during the year 1919.

A detailed report on the fish cultural operations of the department is being published separately in pamphlet form.

BIOLOGICAL STATIONS.

The Atlantic and Pacific biological stations carried on their work actively during the season of 1917.

At St. Andrews, N.B., investigations of a practical and scientific nature were conducted by representatives of the various universities of Canada. One of the chief aims of the researches was to investigate the kinds of fish and marine animals that could be used for food, but have hitherto been neglected. The reports on the investigations, when completed, should be of much practical value.

In connection with the work at St. Andrews, a survey of the fisheries conditions in the eastern part of the gulf of St. Lawrence was undertaken from Eastern harbour in Cape Breton as a base.

For three months the staff, under Dr. A. G. Huntsman, made constant trips over the fishing grounds and accumulated a large mass of observations. Much attention was devoted to the spawning of herring at the Magdalen islands, and the drift of the larvæ; also to hydrographic and plankton studies in sections of water between cape Breton and the Magdalen islands, and from Aspy bay out to a depth of 200 fathoms.

Dr. Knight, of Queens University, carried out an important investigation at Caribou harbour, Nova Scotia, in continuation of his lobster researches.

The pearly fresh-water mussel resources of Ontario were studied, and a report made thereon, which has been published.

At Nanaimo, B.C., work was carried on under the supervision of Dr. C. McLean Fraser, curator of the Pacific coast station. Studies of the life-history of British Columbia salmon were continued and results published in the form of special reports. The marking of salmon was also continued; while the study of fish parasites, hydroids, and a great variety of marine animals was completed.

FISH INSPECTION.

The season of 1917 was the third in which inspection of pickled fish was carried on. There were presented for inspection and the brand, 8,977 barrels of herring, alewives, and mackerel. Of these, 3,083 barrels failed to pass inspection—on account of either the poor condition of the fish, bad grading, or inferior barrels. In the preceding year, 7,213 barrels were inspected, while in the year before that, which was the first, there were 1,328 barrels presented for inspection. The number of packers who submitted their fish for inspection was eighty, against seventy-three in the season of 1916 and sixteen in that of 1915.

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The Inspection Act compels no one to submit either his barrels or fish for inspection, and, therefore, results are dependent on the educative and persuasive efforts of the department, through its inspecting officers. During the season, and prior to its opening, fishermen and packers were visited regularly, and the requirements of the Act, with respect to the manner in which their fish should be cured, pointed out to them. Coopers' shops also were visited, and practical instruction in barrel making given to the coopers. Further, simply worded pamphlets of instruction in barrel making and herring curing in the Scotch method were published by the department early in the year, and copies distributed by the inspecting officers.

Keeping in mind the fact that inspection is entirely voluntary on the part of packers and that the carrying out of such often involves them in a considerable amount of extra labour, it affords a considerable amount of satisfaction to be able to show that more packers presented their fish for inspection, and that more fish were inspected, than in the two preceding years.

Much good work has been accomplished since the passing of the Act, especially in connection with the adoption of a higher grade barrel. Many coopers, however, persist in making barrels as of old. This is encouraged to some extent by a certain class of packer who considers only the few cents he wrongly thinks he saves by buying the cheaper, poor barrel, and will doubtless continue so long as our officers are without the power to enforce the production of a standard package.

The present abnormal demand for pickled fish in the United States, due to lack of supplies from Europe, made it possible, in the course of the year under review, to dispose of fish of indifferent cure, packed in inferior barrels, at prices which seemed high compared with those of normal times. For this reason many packers were hard to convince of the necessity for exercising greater care and producing a first-class article, notwithstanding that properly cured fish packed in good barrels in every case secured a better price than the other kind. For example, while some packers obtained \$7 to \$8 for split herring, and \$10, \$12, \$13, and even up to \$15 per barrel on the spot for herring cured in the Scotch style, others who carefully followed the department's instructions got \$20 and up to \$22 per barrel.

CANNERY INSPECTION.

Under authority of the Meat and Canned Foods Act, all establishments in which fish of various kinds are canned were systematically inspected during the season of 1917. The inspections were undertaken on both coasts by the department's fishery overseers.

The duties of the inspecting officers, as in the past, consisted of supervising the sanitary conditions of each canning establishment, and the utensils used therein; the cleanliness of the employees; the condition of the fish previous to canning; and the manner in which the product is handled.

During the year there were in operation on the Atlantic coast 660 establishments canning lobsters, and 18 canning other fish such as sardines, herring, haddock, mackerel, and clams, while on the Pacific coast there were 93 salmon canneries operated; making a grand total of 771. The total number of inspections made and reported on was 2,364.

In the course of the year the Meat and Canned Foods Act was amended to enable the department to deal more effectively with the canning of fish. Regulations for carrying out the provisions of the amended Act have been framed and adopted, but these will not come into effect till December 15, 1918.

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BAIT-REPORTING SERVICE.

To assist masters of fishing vessels to locate bait supplies during the cod-fishing season, and minimize the time lost in searching from harbour to harbour for bait, there has been in operation, since the season of 1913, a system by which definite information as to the amount of bait landed along certain stretches of the Atlantic seaboard is collected by the local officer of the department and despatched daily by telegram to certain important points, and there posted up.

During the season of 1917 the service was carried on as usual. Each telegram contained definite information as to bait supplies at all important points within the district of the officer who sent the message. Copies of all telegrams were mailed to the department at the end of each week, and the work closely followed and checked.

During the spring months of 1917, 100 telegrams were sent from the Magdalen islands, Souris, P.E.I., and Queensport, N.S., to Canso, Halifax, Lunenburg, and Riverport, N.S.

During July and August, 203 telegrams were sent from Little Bras d'Or, L'Ardoise, Canso, Wine Harbour, and Musquodoboit Harbour, N.S., to North Sydney, Canso, Halifax, Lunenburg, and Shelburne, N.S.; also from Lockeport, N.S., to Canso and Halifax, N.S., and from Shag Harbour and Digby, N.S., to Halifax, Shelburne, and Lockeport, N.S.

From the beginning of September to the middle of November, 46 telegrams, covering information from the counties of Charlotte and St. John, N.B., were sent from Campobello, N.B., to Digby, Yarmouth, Pubnico, and Clark's Harbour, N.S.

This service is being appreciated more and more from year to year, and those in the trade who are interested in the landings of herring, either for bait or food purposes, find that the information furnished is of much benefit to them.

STATISTICAL WORK.

The system in operation by which the statistical information concerning the sea fisheries is collected and compiled, may be described briefly as follows: Each overseer in the course of his rounds gathers from fishermen and fish merchants, details of the quantity and value of fish landed in his district during the current month. From outlying points that cannot be visited with sufficient frequency by the overseer, the information is supplied to him by a local correspondent.

The information thus collected is despatched to Ottawa on a special form, during the first days of each succeeding month. A copy is sent, at the same time, to the Inspector of Fisheries under whose jurisdiction the overseer is, in order that he may follow and check the work of collection.

At Ottawa the monthly returns are checked and compiled to show the totals for each county, for each province, and for the whole of Canada. This information is published monthly in the form of a bulletin, which also contains summarized results of the fisheries in the United States, Newfoundland, the United Kingdom, Norway, and, prior to the outbreak of war, Germany.

At the end of the fishing season, or at the end of the statistical year, before making up his annual returns, each overseer, in inland as well as in sea-fishing districts, visits all parts of his district and obtains more complete information as to the year's catch and its disposal in a fresh, dried, smoked, etc., state. This information reaches the department through the inspectors of fisheries, who check and compile the figures for their respective districts. In the department the figures are again checked. The fuller information is then published in the annual report.

A state of complete satisfaction has not yet been reached with the work of collecting our general fisheries statistics. For no matter how perfect the

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system is, nor how closely the figures are scrutinized afterwards, the department must rely largely on the intelligence and honesty of its outside officers for accurate returns. It may be safely stated, however, that since the adoption of the present system, in 1910, our published statistics are sufficiently near the mark to enable any one who studies them intelligently to arrive at accurate conclusions as to the upward or downward trend of any particular fishery.

EXPENDITURE AND REVENUE.

The total expenditure for all fisheries services, except civil government, for the fiscal year ended March 31, 1918, amounted to \$951,384.32.

The total net fisheries revenue from rents, fines, sales, and license fees, including *modus vivendi* licenses to United States vessels, for the same period amounted to \$118,751.39.

The following is a summary of the sums appropriated and those expended for the various services during 1917-18:—

FISHERIES EXPENDITURE, 1917-18.

Service.	Appropriation.	Expenditure.
	\$	\$ cts.
Salaries and Disbursements Fishery Officers	305,000	267,210 21
Fish Breeding	400,000	270,796 95
Fisheries Patrol Service.....	190,000	187,839 47
Cold Storage and Transportation of Fresh Fish.	125,000	116,578 91
Dog Fish Reduction Works.....	60,000	38,036 74
Canadian Fisheries Museum.....	8,000	4,833 65
Building Fishways and clearing rivers.....	30,000	8,975 39
Legal and Incidental Expenses	4,000	2,452 24
Oyster Culture	6,000	5,003 18
Customs officers <i>à Modus Vivendi</i> Licenses	900	289 65
Fisheries Intelligence Bureau	5,000	2,873 45
Toronto Exhibition	10,000	9,854 72
Inspection of Canned and Pickled Fish.....	25,000	10,639 76
Marine Biological Board.....	26,000	26,000 00
Totals	1,194,900	951,384 32
Fishing Bounty	160,000	159,893 10

The following table shows certain items of fisheries expenditure for 1917-18, by provinces; details will be found in the Auditor General's Report under the proper headings:—

Provinces.	Salaries and Disbursements Fishery officers.	Fish Breeding.	Fisheries Patrol Service.	Building Fishways and clearing rivers.	Inspecting Canned and Pickled Fish.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Nova Scotia.....	64,537 48	36,057 56	33,673 94	343 72	5,773 31
Prince Edward Island..	11,097 11	7,994 24	5,697 91		1,647 80
New Brunswick	55,124 91	37,021 69	16,195 61		2,899 71
Quebec	7,199 95	19,727 25	42,752 33	42 45	50 00
Ontario		69,864 18			
Manitoba.	13,164 99	28,277 84	18,943 45		
Alberta	13,262 62	4,127 81			
Saskatchewan	16,959 11	5,732 96			
British Columbia.....	62,259 06	54,359 16	63,510 80	8,589 22	100 00
Yukon Territory	1,530 75				
General Account	22,074 23	7,634 26	7,065 43	168 94	
Totals	267,210 21	270,796 95	187,839 47	8,975 39	10,639 76

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FISHERIES REVENUE FOR FISCAL YEAR ENDED MARCH 31, 1918.

Provinces.	Amount	Refunds.	Net Amount.
	\$ cts	\$ cts.	\$ cts.
Prince Edward Island	2,345 48		2,345 48
Nova Scotia	7,664 73		7,664 73
New Brunswick	14,439 53	10 00	14,429 53
Quebec	6,663 94		6,663 94
Ontario	3,256 26	4 00	3,256 26
Manitoba	12,910 65		12,910 65
Saskatchewan	3,643 65		3,643 65
Alberta	9,777 94	10 00	9,767 94
British Columbia	53,665 21	150 00	53,515 21
Yukon	375 00		375 00
	114,746 39	174 00	114,572 39
	4,387 50	208 50	4,179 00
			118,751 39

PRODUCTION AND VALUE OF THE FISHERIES.

WHOLE OF CANADA.

The marketed value of our fisheries for the year 1917 amounted to \$52,312,014. This is an increase of \$13,103,666 over the value for the preceding year, which in turn was considerably higher than that for any previously recorded year. To the total the sea fisheries contributed \$47,012,605 and the inland fisheries \$5,299,439.

Each province shows a greater value; but British Columbia with \$6,881,249 more, and Nova Scotia with an increase of \$4,375,417, are mainly responsible for the big increase.

The value of the fishery products of the various provinces in 1917 and the four preceding years may be readily compared by glancing at the following table:—

	1917	1916-17	1915-16	1914-15	1913-14
Prince Edward Island	21,518,595	14,637,346	14,538,320	11,515,086	13,891,398
Nova Scotia	14,468,319	10,092,902	9,166,851	7,730,191	8,007,000
New Brunswick	6,143,088	5,772,879	4,737,145	4,940,083	4,308,707
Quebec	3,414,378	2,991,624	2,076,851	1,924,430	1,850,427
Ontario	2,866,419	2,658,993	3,341,182	2,755,291	2,674,685
P. E. Island	1,786,310	1,344,179	933,682	1,261,666	1,280,447
Manitoba	1,543,288	1,390,002	742,925	849,422	606,272
Saskatchewan		231,946	165,888	132,017	148,602
Alberta	184,009	144,317	64,104	86,720	81,319
Yukon	67,400	60,210	63,730	69,725	68,705
Totals	52,312,014	39,208,378	35,860,708	31,264,631	33,207,748

The price of all kinds of fish was higher than in the preceding year, but the greater total value is not due altogether to that circumstance. The catches of salmon, cod, haddock, pollock, and mackerel were considerably greater. On the other hand, the herring catch was a good deal less, while the lobster catch was slightly less, notwithstanding an extension of the fishing season.

There were 95,198 persons engaged in the various branches of the fishing industry afloat and ashore during 1917. Compared with the preceding year this shows a decrease of 106. Of the total 84,270 were engaged in the sea fisheries and 10,928 in the inland fisheries. There were 8,946 on vessels, tugs, and

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smacks; 62,700 in boats; 744 fishing without boats; and 22,808 working in canneries, freezers, smoke-houses, etc., cleaning and preparing the fish for market.

The amount of capital represented in material such as vessels, boats, fishing gear, and fish-curing establishments is \$37,169,328, of which \$34,062,588 is credited to sea fisheries and \$3,106,740 to inland fisheries.

The fishing industry is somewhat different from other food-producing industries, in that operations are affected not only by weather conditions but by the abundance or scarcity of bait and the erratic and unknown movements of the schools of fish. It is not always the case, therefore, that the employment of a greater number of men and vessels results in a greater production of fish, especially with our present means of capture. For example, the Lunenburg bank fishing fleet of 1917 was the smallest in the past ten years, with the exception of one year, yet the catch was the largest on record. The sardine and large-herring fishery in the Bay of Fundy of 1917 fell far short of that of the preceding year, notwithstanding the operations of fully as much fishing gear and greater preparation for dealing with the catch. Taken as a whole, the operations of our fishermen were successful, from the point of view of quantity taken, as well as remunerative. This will be gathered from the following table which I give to show the relative quantities and values of the chief commercial fishes, returning \$100,000 and upwards, in their order of rank, landed in the whole of Canada during the year under review and the four preceding years:—

		1917	1916-17	1915-16	1914-15	1913-14
Salmon	cwt.	1,642,740	1,239,668	1,410,769	1,409,828	1,551,411
	\$	17,411,029	10,882,431	11,262,381	8,560,386	10,833,713
*Cod	cwt.	2,302,987	2,026,231	2,152,756	1,820,025	1,664,599
	\$	8,281,920	5,449,964	4,489,496	3,886,134	3,387,109
Lobsters	cwt.	474,871	480,898	445,277	408,816	514,646
	\$	5,651,265	5,508,054	4,506,155	4,339,929	4,710,062
Herring	cwt.	1,481,708	1,751,314	1,894,774	2,118,291	2,484,219
	\$	3,693,688	3,050,421	2,906,887	2,735,257	3,173,129
Haddock	cwt.	712,416	582,028	582,522	566,002	405,633
	\$	2,936,719	1,711,271	2,232,022	1,244,840	841,511
Halibut	cwt.	140,024	142,823	226,151	239,920	256,096
	\$	2,066,635	2,263,573	2,261,776	1,793,283	1,036,400
Sardines	brls.	274,359	315,832	333,794	298,885	141,384
	\$	1,910,705	1,481,261	1,229,096	1,349,615	676,668
Mackerel	cwt.	167,067	156,075	180,990	143,712	215,442
	\$	1,333,354	924,746	990,329	826,846	1,280,319
Whitefish	cwt.	178,838	164,992	153,529	159,894	137,887
	\$	1,248,006	1,135,486	1,048,641	975,685	929,962
Smelts	cwt.	73,153	68,629	67,067	93,771	88,728
	\$	1,027,555	847,357	632,733	837,682	810,392
Hake and cusk	cwt.	321,605	385,953	379,959	262,897	353,598
	\$	890,265	757,456	520,051	313,921	490,979
Trout	cwt.	73,662	88,071	115,999	67,890	73,164
	\$	699,950	741,610	870,209	623,504	682,619
Pickarel	cwt.	86,425	105,428	55,722	97,555	61,603
	\$	650,632	871,719	901,183	657,783	449,539
Pollock	cwt.	189,908	143,306	138,801	159,788	150,094
	\$	486,195	268,756	193,788	214,195	187,723
Pike	cwt.	79,383	73,993	69,229	97,724	64,925
	\$	429,366	404,453	347,355	469,919	372,868
Tullibee	cwt.	64,910	58,537	55,787	50,946	20,157
	\$	333,686	301,060	165,569	156,529	63,910
Clams and quahaugs	brl.	55,655	54,942	73,713	87,972	121,135
	\$	222,965	195,805	240,611	282,876	368,325
Alewives	cwt.	98,277	80,020	97,032	90,935	61,768
	\$	196,482	117,083	120,126	106,906	85,445
Perch	cwt.	24,707	22,773	19,218	23,062	14,497
	\$	126,723	114,656	98,119	115,220	72,985
Oysters	brl.	13,632	18,361	21,386	26,545	29,828
	\$	109,265	147,751	147,628	177,979	173,753

* Black cod included.

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ATLANTIC FISHERIES.

Cod, Haddock, Hake, Cusk and Pollock.

A much greater quantity of cod was taken in 1917 than in any of the four preceding years. The catch on some parts of the coast was rather poor, notably on the northern coast of New Brunswick, where adverse weather interfered with the work of fishing, and on the coast of Bonaventure and part of Gaspé, where the fish did not appear until the fall.

Elsewhere cod were plentiful, and the high prices paid induced fishermen to prosecute the fishery with more than usual vigour. In the district westward of Halifax, N.S., which includes the headquarters of the off-shore bank fishing fleet, there was a very large increase in the catch of cod.

Over 90 per cent of the whole production of haddock is landed by the fishermen of Nova Scotia. In the eastern part of the province there was a remarkable increase due mainly to the successful operation of trap nets at Ingonish, Victoria county. There was also a great increase in the central part, that is, between Canso and Halifax. The operation of two steam trawlers no doubt added much to the production of haddock in this section. In the western part of the province, on the other hand, there was a decrease in the quantity taken.

While considerable quantities of hake and pollock are taken in the gulf waters between Inverness county, Nova Scotia, and Kings county, Prince Edward Island, and off the eastern parts of the south coast of Nova Scotia, the great producing area lies at the mouth of and in the Bay of Fundy. Hake are landed in largest quantities by the fishermen of Digby county, Nova Scotia, and pollock by the fishermen of Charlotte and St. John counties, New Brunswick. There was an increase in the quantity of hake landed eastward of Halifax, but it was not sufficient to offset a decrease in the landings in the western part of Nova Scotia and Charlotte and St. John counties. On the other hand there was a larger catch of pollock all over.

The proportion of the catch of cod, haddock, hake and pollock that is dried for market grows less year by year. More of it is being marketed in a fresh or frozen condition; in a semi-soft or salted condition, as boneless; in a smoked condition as finnan haddies or fillets; and in cans, either fresh or smoked. The increased demand for the fish prepared in these ways has greatly enhanced its value, and has had much to do with the great advance in the price of dried fish in recent years.

Herring, Sardines, and Mackerel.

The catch of herring was much below the average. On all parts of the Nova Scotia coast it was rather greater, but in the gulf of St. Lawrence, chiefly along the shores of the northern counties of New Brunswick and the Magdalen islands, where more than half the total Atlantic herring catch comes from, much smaller quantities than usual were taken.

These fish are in greatest abundance during the spring months in the gulf and as drift ice remained in the bays and harbours longer than usual, the bulk of the fish had spawned and moved away before the fishermen were in a position to put out their fishing gear.

Of the total catch of herring on the Atlantic coast, 29 per cent was marketed in a fresh, smoked, or canned state; 30 per cent was marketed as pickled fish; 29 per cent was used as bait in the lobster fishery and in the fishery for cod, haddock, etc. About 12 per cent of the catch was used for fertilizing the land, mainly along the gulf shores.

While it is regrettable that so large a proportion of the catch should be used as fertilizer, it must not be forgotten that the fish so used are those caught in

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the spring time, and as they are usually in great abundance the fishermen's nets sometimes secure more than they can use for bait, and as such fish are useless for any other purpose after they have spawned, it would be absolute waste to throw them back into the sea rather than use them to fertilize farming lands.

The sardine fishery is confined to the Bay of Fundy district and mainly to Charlotte and St. John counties, New Brunswick. The total catch was the smallest in the last four years, but high prices more than made up for the decrease in quantity. The bulk of the fish was sold fresh for canning purposes in the state of Maine. Two establishments in the province of New Brunswick, however, canned 168,000 cases, which, notwithstanding the smaller catch, is 15,000 cases greater than their pack in the preceding year.

The total catch of mackerel was larger than that of the year before, but the fish were not equally abundant on all parts of the coast. Along the south shore of Nova Scotia and northern New Brunswick mackerel were plentiful and large quantities were taken. In the Magdalen Islands and Prince Edward Island districts the quantity landed, of fall fish especially, was much smaller than usual.

About 44 per cent of the mackerel catch was marketed fresh or frozen, about 53 per cent was cured in salt, and about 3 per cent canned. The United States is the principal market for salted mackerel, and as that market was unable to obtain its usual supplies from Europe, the demand for Canadian mackerel was unusually good, and prices advanced to nearly 100 per cent over normal, especially for fat fall fish.

The quantity of each of the kinds mentioned above landed in the last five years are shown in the following table:—

— — —		1917.	1916-17.	1915-16.	1914-15.	1913-14.
Cod	..... cwt.	2,215,455	1,962,860	2,116,886	1,772,864	1,635,379
Haddock	..... "	712,416	582,028	582,522	566,002	405,633
Hake and cusk	..... "	321,412	385,953	379,959	262,897	353,598
Pollock	..... "	189,908	143,306	138,801	159,788	150,094
Herring	..... "	787,681	1,145,229	1,309,952	1,462,578	1,703,543
Sardines	..... brl.	274,359	315,832	336,794	298,885	141,384
Mackerel	..... cwt.	167,067	156,075	180,990	143,712	215,442

Other Sea Fish.

The quantity of halibut landed, by Nova Scotia fishermen chiefly, was over 30 per cent greater than the preceding year's catch. The landings of flat fishes exceeded those for 1916 by about 27 per cent. Skate is being more and more utilized for food purposes, and the quantity landed during 1917 increased by about 55 per cent. Tom cod are caught chiefly on the north coast of New Brunswick during the winter season. The catch shows a slight decrease. Over 100 per cent more swordfish were taken, but the catch of albacore was less by about 12 per cent. The fishery for swordfish and albacore is practically confined to the coast of Nova Scotia. About the usual quantities of bait fish, such as squid and caplin, were taken.

Shellfish.

The lobster fishery is the most important shell fishery we have. In point of value it ranks next to the cod fishery. The total catch in 1917 fell short of that of the preceding year by about $1\frac{1}{4}$ per cent, notwithstanding the extension of the fishing season for a month longer than usual over all the gulf of St.

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Lawrence. It should be noted, however, that the catch in 1916 was 8 per cent greater than that in 1915 and 17 per cent greater than that in 1914.

In Charlotte and St. John counties, New Brunswick, there was a slight increase, but the total was considerably less than the average. In the western part of Nova Scotia there was a decrease of 16 per cent. The fishing began in mid-winter in this district, and many traps and boats were destroyed by storms during the opening months, which in a large measure, no doubt, accounts for the decrease there. In the section which embraces the counties of Halifax and Guysborough, there was a decrease of 20 per cent, but farther east in Cape Breton Island district the fishery resulted in a slight increase.

In the Prince Edward Island district the catch was extremely poor at the beginning of the season, owing to the prevalence of unfavourable weather. The extension of the season, however, for a month, gave an increase over the preceding year of 11 per cent, but it has to be noted in this connection that the catch in the preceding year was about 30 per cent greater than that in either 1915 or 1914.

In the New Brunswick counties which border the gulf there was an increase of about 7 per cent. This was mainly due to the extra month's fishing—the early part of the season being rough and fishing poor. As in the case of Prince Edward Island, the result of the preceding year's fishing was over 30 per cent greater than that in 1915 or 1914. There was a slight decrease in the province of Quebec, due to stormy weather on the Gaspé coast.

There were 660 establishments engaged in canning lobsters on various parts of the coast, and the output amounted to 195,993 cases of 48 pounds each. There were 84,569 hundredweights shipped fresh in shell to market.

The oyster catch on the Atlantic coast was 4,956 barrels less than that in the preceding year. Unfortunately, the production has been falling off from year to year for some time. The oyster beds are located mainly along the shores of northern New Brunswick, Prince Edward Island, and the gulf shores of Nova Scotia. In all three provinces the decrease was common. It is hoped that private culture, which is now being taken up, and more restrictive regulations, will prevent further diminution.

There was a slight decrease in the catch of clams of various kinds. About 40 per cent of the total was canned. Part of the balance was consumed fresh and part used as bait.

The following table is given to show the comparative landings of the chief kinds of shell fish in the past five years:—

	1917.	1916-17.	1915-16.	1914-15.	1913-14.
1. Lobster	411,870	480,898	445,277	408,816	514,646
2. Oyster	11,300	11,100	20,200	21,777	11,100
3. Clam	80,300	57,300	50,000	75,031	140,708

River-Spawning Sea Fish.

The total catch of Atlantic salmon was about an average one. It was not equally good on all parts of the coast, however. There were very few salmon in the principal spawning rivers of Cape Breton island, more particularly Victoria and Inverness counties, and the quantity taken was therefore smaller than that in the preceding year. In the counties of Nova Scotia, south and westward from the gulf to and including Hants and Halifax, the catch was the best in the past twenty years with the exception of one. There was also an increase in the Nova Scotia counties still farther to the westward.

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There was a considerable falling-off in the quantity taken by the fishermen of Charlotte and St. John counties, New Brunswick. Drift-net fishermen found salmon plentiful in the Bay of Fundy, but unfavourable weather retarded operations. Salmon fishing on the St. John river was rather disappointing. On the north shore of New Brunswick, where the Restigouche, Miramichi, and other large though less important rivers empty into the gulf, there was an all-round decrease of 269 hundredweights. Greater catches were landed in the counties of Westmorland, Kent, and Gloucester, but in Northumberland county, and mainly in Miramichi bay, the catch was almost 2,000 hundredweights less. Stormy weather is said to have curtailed operations. The quantity taken in Restigouche county was slightly less than that in the preceding year.

In the province of Quebec the catch was over 1,200 hundredweights short of last year's, owing to storms during May, and the flooding of rivers by heavy rains.

The catch of smelts was greater by 5,194 hundredweights. Almost 78 per cent of the total catch was produced in the northern New Brunswick counties. In that section of the coast the increase amounted to 523 hundredweights. In other parts of the coast the increase was greater, relatively.

The catch of alewives was above the average of the last five years. The increase over last year was 18,000 hundredweights. In St. John harbour, where 56 per cent of the total landings was taken, there was an increase of 15,000 hundredweights. In the western part of Nova Scotia there was a very considerable decrease. About 75 per cent of the catch was cured in salt, for which there was a good demand at good prices. Part of the balance was consumed fresh or smoked, and a part used as bait.

The catch of shad was about 20 per cent less than in 1916. Compared with the years 1913 and 1914, however, 1917 shows an increase of 43 per cent over the former and 30 per cent over the latter.

The following table shows the quantities of the chief river-spawning sea fish taken during 1917 and the four preceding years:—

	1917.	1916-17.	1915-16.	1914-15.	1913-14.
Salmon..... cwt.	39,865	41,801	39,805	38,202	40,237
Smelts..... "	71,989	66,795	65,074	91,634	86,538
Alewives..... "	98,277	80,020	97,032	90,935	61,768
Shad..... "	6,970	8,388	9,367	5,351	4,855

Seals.

The seal hunt in the gulf of St. Lawrence resulted in the capture of 31,145 hair seals against 23,227 in the preceding year.

INLAND FISHERIES.

More pickerel, but rather fewer trout, were taken in the inland waters of New Brunswick. There was a decrease of 50 per cent in the catch of eels.

There was little difference in the production of fish in the inland waters of Quebec, except that the catch of eels was about 40 per cent less.

A smaller quantity of whitefish and pickerel was taken from Ontario waters, but the catch of herring was much greater.

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There was an increased production of all the chief kinds in the waters of Manitoba. The summer catch of whitefish in lake Winnipeg was very good. The fish were of a good size, and fishermen did well. Winter fishing in the northern lakes was not quite so good, owing to the fact that a period of mild weather made the ice unsuitable for operations until the beginning of December.

In Saskatchewan there was an increase of 34 per cent in the catch of whitefish; of 10 per cent in the catch of pike; and 20 per cent in that of pickerel.

In Alberta, whitefish gave an increase of 28 per cent; pike an increase of 34 per cent; and pickerel an increase of 40 per cent.

It is reported that the smaller lakes in the provinces of Saskatchewan and Alberta appear to be as well stocked as ever, despite the fact that settlers are turning their attention more and more to the catching of fish, not only to provide a substitute for animal food in their diet, but to use it as an article of commerce as well.

In the Yukon Territory the catch of whitefish, trout, and grayling fell short of the preceding year's yield. Two lakes in the Stewart district were opened up to commercial fishing, and the returns indicate that the future catch of pike and pickerel may be of considerable importance.

The salmon run in the Yukon waters was about normal, except in the Porcupine river, where for some reason it failed. The total catch was, therefore, slightly less.

The following table shows the comparative quantities of the principal kinds of fresh-water fish taken in all the inland waters of Canada in the last five years:

	1917	1916-17.	1915-16.	1914-15.	1913-14.
Whitefish	178,888	164,000	153,529	159,891	157,887
Pike	20,780	110,055	117,370	92,307	131,614
Pickarel	70,672	85,622	111,361	63,340	68,491
Trout	8,445	105,428	55,722	97,155	61,003
Grayling	79,383	73,993	69,229	97,724	64,925

PACIFIC FISHERIES.

Salmon.

In point of value the salmon fishery of British Columbia is by far our most important fishery. Its value in 1917 represented about 77 per cent of the value of all the fisheries products of that province, and about 32 per cent of the total value of the fisheries products of the whole of Canada.

The usual fourth-year big run of sockeye salmon in the Fraser River district, which was expected in 1917, did not materialize. Consequently, the pack of that particular grade on the Fraser was not more than 18 per cent of an ordinary big year. This great decrease is clearly attributable to the rock slide at Hell's Gate canyon in 1913, due to the blasting operations connected with the construction of the Canadian Northern Railway along the left bank of the river, which prevented a sufficient number of fish from reaching the spawning beds to produce a big run in 1917.

Notwithstanding this failure, however, the total pack of salmon throughout the province was a record one. Other grades which, prior to the outbreak of war, were practically neglected by packers, are now keenly sought after and packed in ever greater quantities. Of the total catch of all kinds, 82 per cent was canned; 15 per cent consumed fresh or frozen; while the balance was marketed in a mild-cured, dry-salted, and smoked condition.

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The extent to which the canning of the cheaper grades has developed in recent years will be gathered from the following table, which gives the annual pack of each class for the last five years:—

	1917.	1916-17.	1915-16.	1914-15.	1913-14.
	cases.	cases.	cases.	cases.	cases.
Sockeye	339,848	214,780	476,042	536,696	972,178
Red Spring	48,630	51,231	51,734	32,908	37,433
White Spring.....	27,646	15,495	6,370	16,420	3,616
Chums.....	475,273	240,201	82,000	184,474	77,965
Pinks	496,759	280,644	367,352	220,340	192,887
Cohoos	157,589	183,623	146,956	120,201	69,822
Blue Backs and Steelhead.....	11,740	9,082	2,927		
Total Pack.....	1,557,485	995,065	1,133,381	1,111,039	1,353,901

The capture of salmon by means of trolling is developing fast in all the coastal waters of the province. Many fishermen are giving up gill-net fishing and adopting this method. The cost of outfitting for trolling is less than for gill netting, and the fisherman is usually left with larger net earnings at the end of the season.

Halibut.

The halibut fishery is carried on almost entirely in the northern waters of the province. For a number of years there has been a steady diminution in the quantity taken. The landings in 1917 were less than those in the preceding year, but it has to be noted that the drop is only about 8 per cent against a 37 per cent drop from 1915 to 1916. From the beginning of the year the price gradually rose until in October it reached 18½ cents per pound to the fishermen. It fell again to 15 cents toward the end of the year. There was a shortage of bait as usual during the summer months, due not so much to scarcity of bait fish as to the disinclination to fit out and go farther to sea after them at that season of the year.

Herring.

The production of herring was slightly less than in the preceding year, but its value was greater. A somewhat smaller quantity was dry salted for the cheaper markets of the Orient, while more than usual was canned and cured in the Scotch style, for which high prices were secured. Of the total catch, 12 per cent was used as bait; 56 per cent was dry salted; and 32 per cent consumed fresh, canned, smoked, and pickled. Not more than 27 per cent of the total herring value was contributed by the dry-salted fish, however; while no less than 68 per cent of the value was accounted for by fish that were used fresh, canned, smoked, and pickled.

Other Sea Fish.

Black cod are steadily increasing in importance as a food fish. The quantity landed in 1917 was 38 per cent greater than in the preceding year. The bulk of the increase is due to the fact that halibut fishermen now bring in all they take of this fish. It is marketed chiefly in a fresh or smoked condition. The total catch of flatfishes of various kinds was greater by more than 120 per cent.

These are of excellent quality, and as they become better known to the consuming public will certainly be used in ever greater quantities. Pilchards appear in our returns for the first time. A total of 1,363 cwts. was landed on the west coast of Vancouver island, from which there were canned 1,090 cases

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of 48 lbs. each and 200 barrels cured in salt. The catch of smelts, skate, and rock cod amounted in the aggregate to 3,883 against 2,620 cwts. in the preceding year.

Shellfish.

The oyster fishery yielded 1,789 barrels, which represents an increase of about 15 per cent. Unlike the oyster fishery on the Atlantic coast, the British Columbia one seems to be increasing from year to year recently. The catch of clams amounted to 11,998 barrels. This is an increase of 40 per cent over the catch in the preceding year. Half the catch was used fresh, while the other half was canned. There were no less than 5,886 cwts. of edible crabs landed, which amounted in value to \$48,424. The catch of 1917 was nearly 80 per cent greater than that of 1916.

Whales and Seals.

There were three whaling stations in operation on the Pacific coast, and the number of whales caught was 379. In the preceding year the catch was 403. The number of fur seals taken by the Indians along the coast amounted to 218 against 159 in the preceding year.

In the following table will be seen the quantities of the chief kinds of fish landed in British Columbia in the last five years:—

		1917.	1916-17.	1915-16.	1914-15.	1913-14.
Salmon	... cwt.	1,601,520	1,196,432	1,369,394	1,369,740	1,509,354
Herring	"	487,241	496,030	467,452	563,406	649,062
Halibut	"	113,500	123,062	194,896	214,444	223,465
Flatfishes, other...	"	15,632	7,013	4,575	6,642	2,180
Black Cod	"	87,532	63,371	35,870	47,161	19,220

The relative total value of Atlantic, Pacific, and inland fisheries in the last five years is shown in the table which follows:—

	1917.	1916-17.	1915-16.	1914-15.	1913-14.
	\$	\$	\$	\$	\$
Atlantic	25,491,010	19,748,667	16,703,182	15,683,171	15,581,413
Pacific	21,518,595	14,637,346	14,578,359	11,515,086	13,891,398
Inland..	5,299,439	4,822,365	4,619,206	4,066,374	3,734,937
Grand totals.....	52,312,044	39,208,378	35,860,708	31,264,631	33,207,748

In comparing the value produced in one division with that in another of the three divisions in the foregoing table it should be kept in mind that during 1917, for example there were 63,128 persons engaged in the fisheries of the Atlantic, 20,883 in those of the Pacific, and 11,111 in those of the inland waters.

Appended to this report are tables showing the quantity and value of each kind of fish, and the number and value of vessels, gear, etc., for the whole of Canada; also the quantity and value of each kind of fish, and the number and value of vessels, etc., by provinces.

Gasoline engines are being utilized more and more by fishermen on both the Atlantic and Pacific coasts to enable them to get speedily to and from the

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fishing grounds. In 1917 there were 14,823 boats with such engines in use against 12,828 in the preceding year.

The use of steam trawlers on the Atlantic coast in recent years has immensely stimulated the trade in fresh fish, by the regularity with which they land supplies. These vessels operate all through the winter as well as summer, and their trips to and from the fishing grounds can be exactly timed to suit the requirements of the trade. In view of the continued great demand for all kinds of Canadian fish at home, in the United States, and overseas, and of the preparations made for a vigorous prosecution of the fisheries on river, lake, and ocean during 1918, I look with confidence for another substantial increase in the value of our fisheries.

CONCLUDING REMARKS.

In concluding this report I desire to say that both the Inside and the Outside Service of the Fisheries Branch are strongly represented at the front. At the outbreak of the war there were six officials in the Inside Service of the branch who were eligible for military service. Of these, five enlisted.

It is with the deepest regret that I chronicle the death of one of these,—Lieutenant B. W. Harmon, M.C., D.C.M., etc. Lieutenant Harmon was a young man of exceptional ability and high ideals. He had a deep sense of responsibility and most earnestly devoted himself to his Departmental duties. Had he lived he was destined to take an important part in the fisheries administration of this country.

At the outbreak of the war he was engaged on a special mission to the Pribilof islands—the United States fur seal group—in Alaska. At the first opportunity after learning that war was declared, he left for Ottawa to seek leave of absence and enlist. He went across with the first contingent as a private. He was promoted on the field to corporal and then to lieutenant. He was awarded the Distinguished Conduct Medal for conspicuous gallantry and devotion at Givenchy in June, 1915. Shortly afterwards he was awarded the Cross of St. George of Russia, and early in 1917 he was given the Military Cross, the official order stating that “he led a raiding party, bombed three dug-outs, inflicting many casualties, and brought back two unwounded prisoners.” Later on he joined the Flying Service in which he met his death while attacking, single-handed, eight enemy machines.

While all those who have gone overseas are performing gallant services, the work of Major Raymond Collishaw of the British Columbia Fisheries Patrol service has been so outstanding that special mention of it herein can involve no unfairness to any other. Mr. Collishaw entered the Flying Service in the early stages of the war. He was rapidly promoted until now he is a squadron commander, with the rank of major. Full information as to his achievements is not yet before me, but it is known that he has received at least five decorations, amongst them being the D.S.O. with bar, the D.S.C., and the Croix de Guerre, with palms. He has over fifty enemy planes to his credit. So far he has not been wounded.

Major J. A. Motherwell, chief clerk in the office of the chief inspector for British Columbia, after rendering conspicuous services was very severely wounded in action in France during the latter portion of the year, and was still in the hospital at the end of the year.

The work of the Fisheries Branch has been extremely heavy throughout the year, but it affords me pleasure to state that by continuous devotion to their duties on the part of both the officers and clerks it has been efficiently performed.

I am, sir, your obedient servant,

G. J. DESBARATS,

Deputy Minister of the Naval Service.

9 GEORGE V, A. 1919

TABLE 1.—RECAPITULATION of the Quantities and Values of all Fish caught and landed in a Green State, and of the Quantities and Values of all Fish and Fish Products Marketed in a Fresh, Dried, Pickled, Canned, etc. State, for the **Whole of Canada**, during the year 1917.

Name of Fish	Sea Fisheries				Inland Fisheries		Both Fisheries		Total Marketed Value
	Caught and landed		Marketed		Caught and Marketed		Marketed		
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
		\$		\$		\$		\$	
Salmon	1,440,471	10,121,003	1,557,921	3,074,196	2,294	36,298	300,214	3,110,434	
“ used fresh.....			1,557,921	14,021,244			1,557,921	14,021,244	
“ canned.....			1,617	28,197			1,617	28,197	
“ dry-salted.....			14,270	139,211			14,270	139,211	
“ mild-cured.....			8,611	111,943			8,611	111,943	17,411,029
Lobsters.....	471,871	2,147,788	195,993	3,921,826			195,993	3,921,826	
“ canned..... cases			84,569	1,722,379			84,569	1,722,379	5,054,235
“ shipped in shell cwt.									
Cod.....	2,215,455	1,000,197	180,187	1,000,197			180,187	1,000,197	
“ used fresh.....			287,784	1,088,745			287,784	1,088,745	
“ green-salted.....			5,264	72,865			5,264	72,865	
“ smoked fillets.....			481,613	4,645,700			481,613	4,645,700	7,492,515
“ dried.....									
Black Cod.....	87,502	494,200	73,164	743,229			73,164	743,229	
“ used fresh.....			6,786	131,709			6,786	131,709	
“ smoked.....			386	4,338			386	4,338	
“ green-salted.....			8	128			8	128	879,464
“ dried.....									
Haddock.....	712,416	1,019,218	221,807	1,159,359			221,807	1,159,359	
“ used fresh.....			13,137	84,522			13,137	84,522	
“ smoked (fin-nans)..... cwt.			41,382	598,939			41,382	598,939	
“ green-salted.....			70,496	419,273			70,496	419,273	
“ dried.....			81,730	674,626			81,730	674,626	2,026,719
Haddock.....	321,605	619,097	25,795	94,585			25,795	94,585	
“ used fresh.....			6,873	49,115			6,873	49,115	
“ smoked fillets.....			5,314	64,026			5,314	64,026	
“ dried.....			88,961	602,164			88,961	602,164	
“ smoked.....			25	375			25	375	800,205
Trout.....	180,008	360,070	26,444	58,471			26,444	58,471	
“ used fresh.....			5,142	25,434			5,142	25,434	
“ green-salted.....			2,266	25,213			2,266	25,213	
“ smoked fillets.....			48,795	377,077			48,795	377,077	480,135
“ dried.....									
Herring.....	1,204,000	1,578,617	207,432	741,120	265,807	1,004,918	413,237	1,544,134	
“ used fresh.....			58,455	372,120			58,455	372,120	
“ canned..... cases			15,001	311,624			15,001	311,624	
“ smoked..... cwt.			111,887	328,721			111,887	328,721	
“ dry-salted.....			87,180	755,751			87,180	755,751	
“ pickled.....			145,078	342,672		1,962	145,078	342,672	
“ dried.....			50,338	38,650			50,338	38,650	1,001,088
“ used fresh.....			75,831	701,780			75,831	701,780	
“ canned..... cases			75	600			75	600	
“ salted.....			30,394	639,971			30,394	639,971	1,333,354
“ used fresh.....			1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	12,400
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047	3,486	1,004,800
“ used fresh.....	91,831	130,919	1,047	7,700	1,047	7,700	1,047	7,700	
“ salted.....			1,047	3,486	1,047	3,486	1,047		

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TABLE 1.—RECAPITULATION.—of the Quantities and Values of all Fish, etc.

Kinds of Fish.	Sea Fisheries				Inland Fisheries.		Both Fisheries.		Total Marketed Value.
	Caught and landed.		Marketed		Caught and Marketed		Marketed.		
	Quantity	Value.	Quantity	Value	Quantity	Value	Quantity	Value	
		\$		\$		\$		\$	\$
Soles..... cwt.	8,244	28,493	8,244	81,109			8,244		81,109
Flounders..... "	10,659	24,241	10,659	55,995			10,659		55,995
Skate..... "	5,044	8,174	5,044	20,883			5,044		20,883
Smelts..... "	73,153	718,137	73,133	1,027,545			73,133	1,027,545	
" used as bait..... "			20	10			20	10	1,027,555
Oulachons..... "	1,231	4,836	1,231	10,991			1,231		10,991
Brill..... "	5,142	15,426	5,142	51,420			5,142		51,420
Tom Cod..... "	13,168	25,920	13,168	38,893			13,168		38,893
Octopus..... "	184	1,388	184	1,656			184		1,656
Rock Cod..... "	1,086	3,900	1,086	8,688			1,086		8,688
Pilchards..... "	1,363	2,726							
" salted..... brl.			200	2,000			200	2,000	
" canned..... cases			1,090	9,810			1,090	9,810	11,810
Whiting..... cwt.	545	1,722							
" used fresh..... "			345	1,725			345	1,725	
" smoked..... "			100	1,000			100	1,000	2,725
Grayfish (exported fresh) " " " " " "	11,712	4,673	11,200	4,480			11,200	4,480	
" canned..... cases			289	1,300			289	1,300	5,780
Swordfish..... cwt.	4,338	22,590	4,338	33,178			4,338		33,178
Albacore..... "	15,657	52,843							
" used fresh..... "			15,521	81,451			15,521	81,451	
" canned..... cases			85	510			85	510	81,961
Oysters..... brl.	13,632	102,593	13,632	109,265			13,632		109,265
Clams & Quahaugs..... "	55,655	101,794							
Clams & Quahaugs, use fresh..... "			35,840	93,710			35,840	93,710	
Clams & Quahaugs used as bait..... "			360	720			360	720	
Clams & Quahaugs canned..... cases			19,445	128,535			19,445	128,535	222,965
Dulse, Crabs, Cockles, etc..... cwt.	19,540	53,290	9,601	66,918			9,601		66,918
Scallops..... brl.	6,600	26,800	100	800			100	800	
" shelled..... gal.			13,000	26,000			13,000	26,000	26,800
Squid..... brl.	7,339	23,975	7,339	29,751			7,339		29,751
Caplin..... "	27,769	41,407	27,769	41,449			27,769		41,449
Trout..... cwt.	2,990	32,188	2,990	45,183	70,672	654,767	75,662		699,950
Sturgeon..... "	466	5,709	466	10,045	5,439	87,966	5,905		98,011
Bass..... "	1,437	16,060	1,437	20,335	383	4,147	1,820		24,482
Eels..... "	3,978	23,455	3,978	30,647	7,656	59,810	11,634		90,457
Whitefish..... "					178,838	1,248,006	178,838		1,248,006
Pickrel..... "					86,425	650,632	86,425		650,632
Perch..... "	492	3,154	492	4,920	24,215	121,803	24,707		126,723
Pike..... "					79,383	429,396	79,383		429,396
Tullibee..... "					64,910	333,686	64,910		333,686
Maskinongé..... "					319	3,188	319		3,188
Catfish..... "					4,850	38,210	4,850		38,210
Goldeyes..... "					8,131	40,209	8,131		40,209
Carp..... "					16,695	40,890	16,695		40,890
Mullets..... "					11,013	22,026	11,013		22,026
Mixed Fish..... "	7,446	12,694	7,446	24,049	134,680	481,493	142,126		505,542
Tongues and Sounds..... "			3,650	84,635			3,650		84,635
Caviare..... lb.					11,831	15,106	11,831		15,106
Sturgeon Bladders..... No.					1,628	977	1,628		977
Salmon roe..... cwt.			1,564	7,820			1,564		7,820
Hair seals..... No.	31,145	43,320							
" skins..... "			31,145	71,690			31,145		71,690
Fur Seals..... "	218	2,180							
" skins..... "			218	6,540			218		6,540
Belugas..... "	91	682							
" skins..... "			91	682			91		682
Whales..... "	380	195,700							
Whale Bone and Meal..... tons.			291	10,185			291		10,185
Fertilizer..... "			1,267	71,889	2,250	922	3,517		72,811
Whale Oil..... gal.			437,245	342,422			437,245		342,422
Fish Oil..... "			582,943	397,164			582,943		397,164
Seal Oil..... "			84,927	83,937			84,927		83,937
Porpoises..... No.					82	4,100	82		4,100
Silver Hake..... cwt.	140	56	140	56			140		56
Witches..... "	5	15	5	50			5		50
Sea Weed..... tons.			550	550			550		550
Tomalley..... cases			253	5,060			253		5,060
Fish Offal..... tons.			150	300			150		300
Glue..... gal.			900	450			900		450
Gill Bone..... cwt.			510	12,802			510		12,802
Totals.....		29,370,516		47,012,605		5,299,439			52,312,044

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TABLE 2.—RECAPITULATION of the Number of Fishermen, etc., and of the Number and Value of Fishing Vessels, Boats, Nets, Traps, etc., used in the Sea and Inland Fisheries of the **Whole of Canada** for the year 1917.

	Sea Fisheries.		Inland Fisheries.		Both Fisheries.	
	Number.	Value.	Number.	Value.	Number.	Value.
		\$		\$		\$
Steam fishing vessels (tonnage 2,413 ..)	44	1,010,943	131	742,100	175	1,753,043
Sailing and gas-dene vessels ..	1,358	4,143,118			1,358	4,143,118
Boats (sail and row)	22,780	1,011,979	4,564	130,841	27,344	1,142,820
Gas-dene boats	13,933	4,257,521	890	363,223	14,823	4,620,744
Carrying smacks ..	522	372,785			522	372,785
Gill-nets, seines, trap and smelt nets, etc.	162,271	3,891,023		1,456,474		5,347,497
Weirs	734	745,765	305	44,385	1,039	790,150
Trawls	22,517	353,633			22,517	353,633
Spears			247	766	247	766
Skates of gear	6,828	86,440			6,828	86,440
Hand lines	72,681	89,790	4,054	4,888	76,735	94,678
Eel traps.....			74	198	74	198
Crab traps	1,140	5,700			1,140	5,700
Lobster traps.....	1,497,179	1,871,701			1,497,179	1,871,701
Lobster canneries	610	1,765,725			610	1,765,725
Salmon canneries...	89	6,528,743			89	6,528,743
Oil factory.....	1				1	
Clam canneries	12	251,832			12	251,832
Sardine canneries.....	2				2	
Halibut dories	69	6,900			69	6,900
Salmon traps	2	10,000			2	10,000
Freezers and ice-houses.....	873	3,021,980	2,019	272,756	2,892	3,294,736
Fishing piers and wharves.....	2,808	2,357,484	273	75,269	3,081	2,432,753
Whaling stations	4	170,855			4	170,855
Pile drivers and seine reels	451	33,350			451	33,350
Fish wheels..			3	355	3	355
Crab establishments	2	1,200			2	1,200
Oyster establishment	1	15,450			1	15,450
Salteries	3	12,000			3	12,000
Smoke and fish-houses.....	9,544	2,046,671	216	15,485	9,760	2,062,156
Totals		34,062,588		3,106,740		37,169,328

PERSONS EMPLOYED.

	Sea Fisheries	Inland Fisheries	Both Fisheries
Number of men employed on vessels.....	7,431	755	8,186
" boats.....	53,491	9,209	62,700
" carrying smacks	760		760
Number of persons employed in fish-houses, freezers, canneries, etc.....	22,329	403	22,732
Number of men fishing (not in boats).....		744	744
Totals	84,011	11,111	95,122

TABLE 3.—RECAPITULATION by Provinces, of the Quantities and Values of all Fish and Fish Products Marketed during the year 1917.

Kinds of Fish.	Nova Scotia.		New Brunswick.		Prince Edward Island.		Quebec.		Ontario.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
1 Salmon, used fresh.....	9,604	190,138	15,983	242,950	65	780	11,110	105,517		\$
2 " " canned.....	346	3,114					90	765		
3 " " smoked.....	199	4,975								
4 " " dry-salted.....	36	720					1,564	12,512		
5 " " mild-cured.....										
6 Lobsters, canned.....	78,426	1,582,310	43,549	870,980	62,000	1,240,000	12,018	238,576		
7 " " shipped in shell.....	64,096	1,488,861	19,603	224,494	112	1,456	758	7,588		
8 Cod, used fresh.....	151,346	903,352	13,254	49,362	3,688	15,442	11,899	32,041		
9 " " green-salted.....	81,063	545,492	20,961	123,888	24,382	184,072	161,378	830,293		
10 " " smoked fillets.....	5,264	72,865								
11 " " dried.....	299,654	3,031,825	34,630	346,300	6,124	61,240	141,205	1,206,344		
12 Black cod, used fresh.....										
13 " " green-salted.....										
14 " " smoked.....										
15 " " dried.....										
16 Haddock, used fresh.....	216,230	1,141,128	5,259	15,777	300	2,400	18	54		
17 " " canned.....	10,287	61,722	2,850	22,800						
18 " " smoked.....	41,382	598,939								
19 " " green-salted.....	70,066	417,705	75	325			355	1,243		
20 " " dried.....	78,024	646,726	2,035	15,520	613	5,912	1,078	6,468		
21 Hake and cusk, used fresh.....	24,839	90,102	157	327	291	1,164	365	1,277		
22 " " smoked.....										
23 " " green-salted.....	803	3,695			6,070	36,420				
24 " " smoked fillets.....	4,646	58,682	668	5,344						
25 " " dried.....	60,015	506,289	25,600	159,456	3,146	25,219	200	1,200		
26 Pollock, used fresh.....	8,955	23,492	17,489	34,978						
27 " " green-salted.....	5,142	25,434								
28 " " smoked fillets.....	2,266	25,213								
29 " " dried.....	32,804	265,140	15,991	111,937						
30 Herring, used fresh.....	35,110	94,561	9,485	25,662	2,738	5,582	76,930	84,191	201,801	992,909
31 " " canned.....	7,263	36,315	4,542	31,794						
32 " " smoked.....	10,354	60,997	32,030	193,590			7,004	28,012		
33 " " dry-salted.....										
34 " " pickled.....	58,453	499,201	7,491	61,218	975	6,825	12,974	70,649		
35 " " used as bait.....	51,750	150,146	29,932	66,979	8,486	25,458	26,425	28,265		
36 " " fertilizer.....	92	184	20,221	27,241			30,025	11,225		

TABLE 3.—RECAPITULATION by Provinces, of the Quantities and Values of all Fish, etc.—*Con.*

Kinds of Fish	Nova Scotia.		New Brunswick.		Prince Edward Island		Quebec.		Ontario.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
37 Mackerel, used fresh	56,221	\$ 470,352	18,806	225,672	737	\$ 5,425	64	334		\$
38 " " " " " "	75	600								
39 " " " " " "	23,150	502,572	183	2,745	1,009	17,130	6,052	108,724		
40 " " " " " "	1,123	9,341	4,559	35,557			286	2,242		
41 " " " " " "	170	2,076	164	2,359						
42 " " " " " "	6,104	11,812	20,046	42,888	100	500				
43 " " " " " "	2,804	18,329	21,133	122,953						
44 " " " " " "	205	885	168,070	1,008,420						
45 " " " " " "	236	472	240,128	900,480			56	448		
46 " " " " " "	24,877	336,820	103	1,075			1,515	7,728		
47 " " " " " "										
48 " " " " " "	438	2,400								
49 " " " " " "	4,401	20,745	3,847	9,127			442	2,522		
50 " " " " " "	3,587	10,734	24	32						
51 " " " " " "	7,964	106,146	55,703	834,415	6,401	53,984	1,924	18,740		
52 " " " " " "										
53 " " " " " "	338	478	12,565	37,695	95	210	170	510		
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60 " " " " " "										
61 " " " " " "										
62 " " " " " "	289	1,300								
63 " " " " " "	4,338	33,178								
64 " " " " " "	15,521	81,451								
65 " " " " " "	85	510								
66 " " " " " "	1,879	13,300	6,926	41,556	3,038	22,207	1,346	3,302		
67 " " " " " "	13,122	28,112	15,070	24,984	670	2,080	4	32		
68 " " " " " "	168	853	12,842	77,052	425	2,550				
69 " " " " " "	2,810	13,605	905	4,889						
70 " " " " " "	13,000	26,000								
71 " " " " " "	4,852	23,703	100	800			2,080	4,390		
72 " " " " " "			467	1,628			27,769	41,449		
73 " " " " " "							1,786	18,075		
74 " " " " " "	1,056	17,225	1,329	18,386	475	3,900			62,829	592,433

SESSIONAL PAPER No. 39

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TABLE 3.—RECAPITULATION by Provinces, of the Quantities and Values of all Fish, etc.—*Con.*

Kinds of Fish.	Manitoba		Saskatchewan		Alberta		Yukon		British Columbia		
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
1 Salmon, used fresh		\$		\$		\$				\$	1
2 " " canned							1,385	20,775	262,067	2,550,274	2
3 " " smoked									1,557,485	14,017,365	3
4 " " dry-salted									1,418	23,222	4
5 " " milk-cured									12,070	125,979	5
6 Lobsters, canned									8,611	111,913	6
7 " " shipped in shell											7
8 Cod, used fresh											8
9 " " green-salted											9
10 " " smoked fillets											10
11 " " dried											11
12 Black cod, used fresh									73,164	743,229	12
13 " " green-salted									386	4,338	13
14 " " smoked									6,786	131,709	14
15 " " dried									8	128	15
16 Haddock, used fresh											16
17 " " canned											17
18 " " smoked											18
19 " " green-salted											19
20 " " dried											20
21 Hake and cusk, used fresh											21
22 " " smoked									143	715	22
23 " " green-salted									25	375	23
24 " " smoked fillets											24
25 " " dried....											25
26 Pollack, used fresh											26
27 " " green-salted											27
28 " " smoked fillets											28
29 " " dried..											29
30 Herring, used fresh											30
31 " " canned									87,173	341,239	31
32 " " smoked									46,650	304,017	32
33 " " dry-salted..									6,263	29,025	33
34 " " pickled									161,865	328,721	34
35 " " used as bait									7,293	117,828	35
36 " " fertilizer									28,785	71,824	36

TABLE 3.—RECAPITULATION by Provinces, of the Quantities and Values of all Fish, etc.—*Con.*

Kinds of Fish.	Manitoba		Saskatchewan		Alberta		Yukon		British Columbia	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
88 Mixed fish	74,640	\$ 158,750	8,472	\$ 22,638	1,177	\$ 3,335	755	\$ 19,075	1,648	\$ 13,184
89 Salmon and trout	5,700	\$ 8,250								
90 Sturgeon bladders										
91 Salmon roe...										
92 Hair seal skins									1,564	7,820
93 Fur seal skins									218	6,540
94 Beluga skin									291	10,185
95 Bone meal									1,220	70,164
96 Fertilizer..									426,995	342,247
97 Whale oil..									44,820	22,892
98 Fish oil..										
99 Seal oil...										
100 Fish offal										
101 Glue...										
102 Pomelley										
103 Porpoises										
104 Sea weed										
105 Witches..									50	50
106 Oil, bone									510	12,802
107 Silver hair										
108										
Totals		1,544,288		370,238		184,009		67,400		21,518,595

TABLE 4.—RECAPITULATION by Provinces of the Number and Value of Fishing Implements, vessels, boats, etc., used in the Fishing Industry of Canada during the year 1917, and the number of Persons employed.

Province.	Persons employed.			Vessels tugs and carrying smacks.		Boats.		Value of seines, trap and smelt nets, etc.	Value of hand lines weirs, trawls, etc.	Value of lobster plant, etc.	Approximate value of salmon and other fish-houses, freezers, and fixtures.	Total value.
	Number in vessels etc.	Number in boats.	Number in canneries, fish-houses, etc.	Number	Value.	Gasolene.	Sail and row.					
Nova Scotia.....	4,814	16,953	4,790	805	2,499,010	5,219	7,793	863,607	354,416	1,649,510	2,847,650	9,695,818
New Brunswick.....	1,656	14,070	5,304	552	489,530	2,194	8,843	772,896	742,106	737,301	1,175,137	4,859,815
Prince Edward Isl'd.....	52	3,398	2,438	22	9,700	1,812	405	76,015	22,030	757,230	349,657	1,560,682
Quebec.....	80	9,577	2,064	31	27,805	1,652	3,693	395,309	99,235	493,385	554,452	2,288,724
Ontario.....	635	3,070	.....	120	601,100	702	1,108	1,147,692	3,988	.....	235,238	2,331,182
Manitoba.....	120	2,072	182	11	141,000	7	1,062	166,713	100	.....	101,420	462,556
Saskatchewan.....	.....	1,661	.....	.....	.....	11	540	56,407	141	.....	3,250	72,580
Alberta.....	.....	1,032	30	.....	.....	54	378	36,518	30	.....	10,830	78,480
Yukon Territory.....	.....	233	8	.....	.....	.....	112	3,225	493	.....	5,500	12,433
British Columbia.....	1,589	11,378	7,916	514	2,500,801	3,172	3,548	1,829,115	119,381	.....	9,519,941	15,807,058
Totals.....	8,946	63,444	22,732	2,055	6,268,946	14,823	27,413	5,347,497	1,341,920	3,637,426	14,803,075	.....

Grand Total Value..... \$37,169,328





